ICARES Heat Island Model

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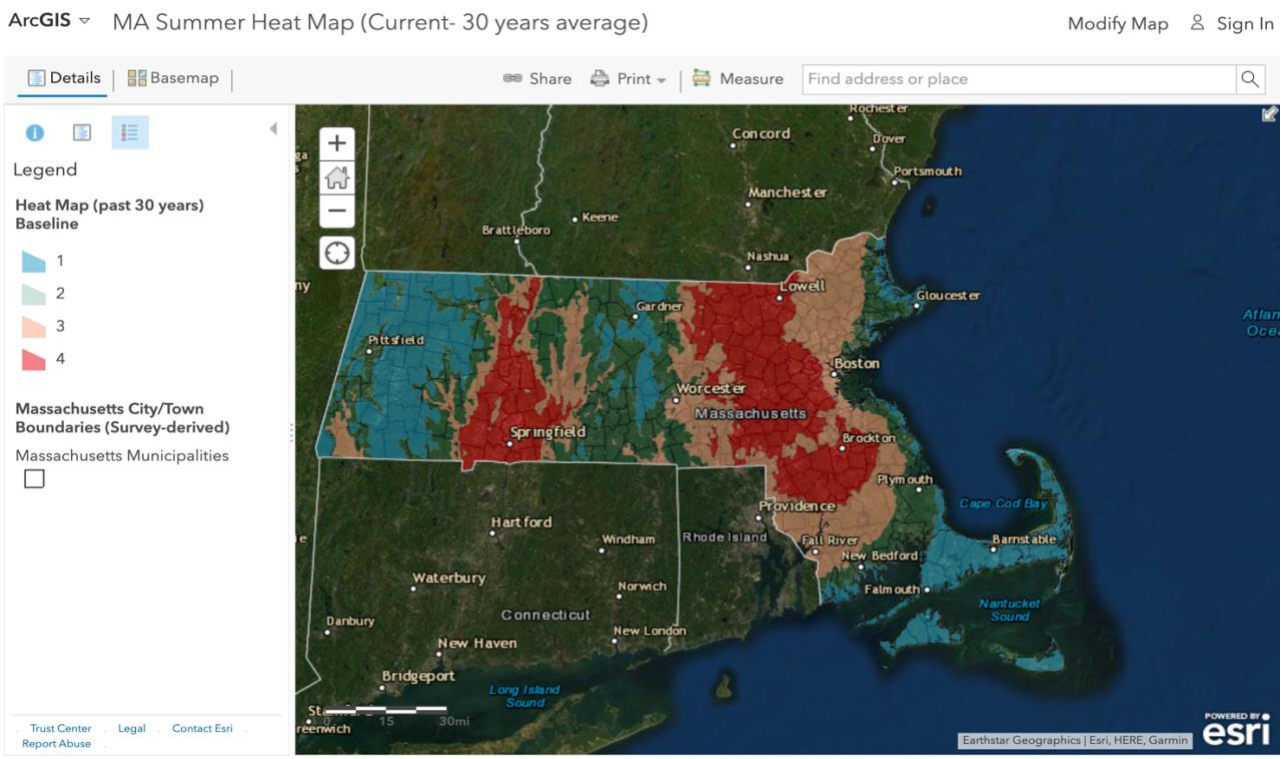
Information for Climatic Adaptation and Resilience for Ecosystem Services (ICARES) is a suite of assessments that model specific ecosystem services under current and future climate scenarios. The primary purpose is to evaluate the role of vegetation, especially urban trees in mitigating vulnerability to stressors like urban heat island, stormwater runoff, and impacts to water supplies. The heat island effect in urban areas have serious implication on public health and energy consumption, and urban forest can mitigate this effect. The following tools are developed using extensive data over the past 30 years in Massachusetts, recent high resolution land use landcover dataset, and GCM climate projections from CCMP4-AR5. These heat map models (ICARES_HeatNow for current climate and ICARES_HeatFuture for future climate) are tentatively accessible from the following two links:

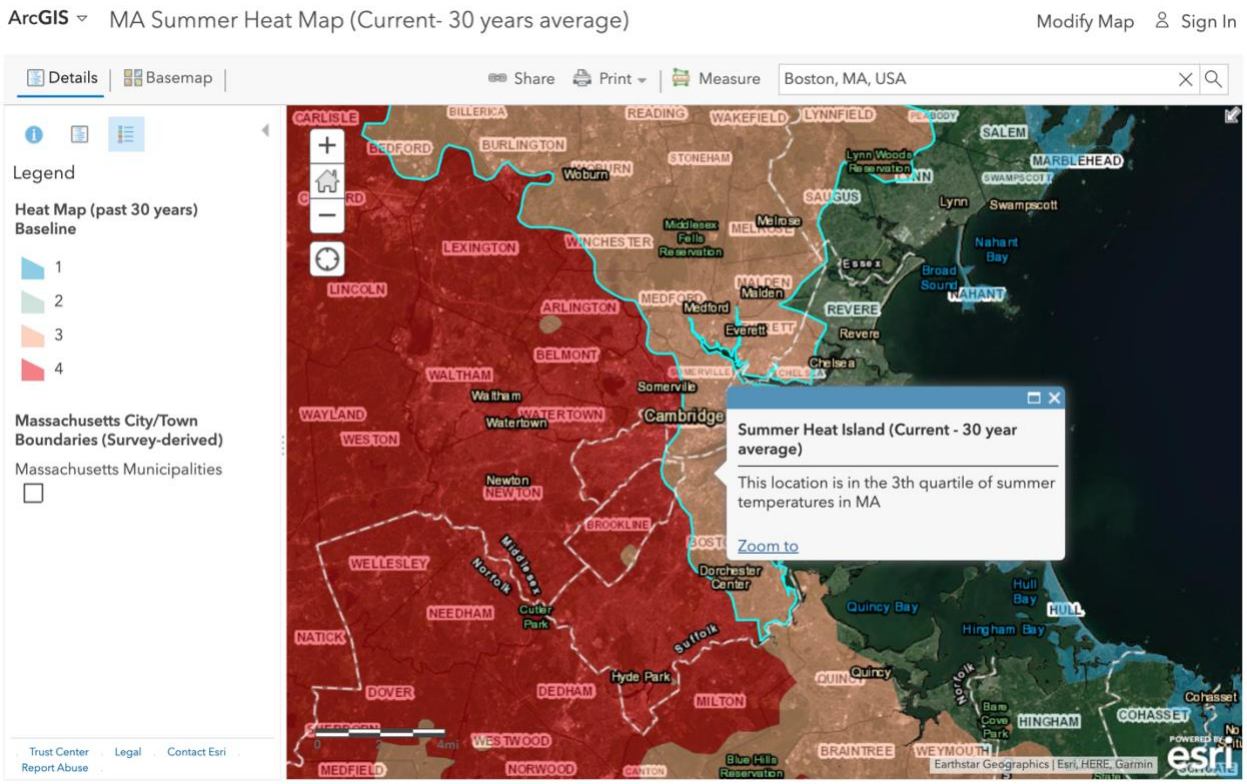
ICARES_HeatNow: https://arcg.is/0Ga8jq

ICARES_HeatFuture: https://arcg.is/10T9Xb

Start by searching for an address or Zoom to the region you are interested in. Click on the location and information on the quartile range of the summer heat Island will be displayed in the pop-up window. The model is being improved to add specific benefits of urban forests in mitigating the heat island effect in urban areas. The ICARES modules will be compiled on a ICARES website. Screenshots of both models at state and city scale are presented in the following pages.

ICARES_HeatNow





ICARES_HeatFuture